



**NOAA Teacher at Sea**  
**Tamil Maldonado**  
**Onboard NOAA Ship FAIRWEATHER**  
**July 18 - 28, 2005**

**Log 10**

Tuesday July 26, 2005

Day: Tue July 26, 2005	Present Weather: CL/F	Sea wave height: 2
Time: 8:00 a.m.	Visibility: 8	Swell wave height: 5-7ft
Latitude: 56 <sup>0</sup> 54.2'N	Wind direction: 160	Sea water temp: 12.7
Longitude: 153 <sup>0</sup> 22.1'W	Wind speed: 16 knts	Sea level press: 1007.8

We are underway in the Gulf of Alaska, Southeast of Sitkinak Island. This is our last day of doing FOCI survey. We used the Bongo Tow and CTD throughout day.

At 5:00 p.m. we were done with survey and transiting to Dutch Harbor, AK

At night I interviewed Chief Scientist, Janet Duffy-Anderson, one more time. We talked about how to know fish ages and how fast they are growing. It is because of their rings—the number of rings a larvae has will give the days they are alive. Also, you can know their age by how far apart those rings are, which gives you the information of how fast they are growing.

Furthermore we talked about atmospheric changes and how this is affecting the ecosystem. The target of FOCI is to get biological as well as physical data on the changes in the ocean and how those changes interact with the biota. They wanted to do this research in Alaska because you can see changes more rapidly at the poles of the planet. We have seen phenomena like El Nino, La Nina and others increasing in frequency and duration. The rate between phenomena is increasing—they are happening more frequently for the last decade.

I will be able to get fisheries raw data in time series done by FOCI and will continue doing some research back home in this area.

At night we did an acoustic hydrographic survey, and by changing depth target we got different data, all related. Changing the depth target changes how deep the beams go through the water and come back. We worked with Hips & Sips Computer Software. This program also corrects in real time the error estimates for each contributing sensor. These entries are necessary for the computation of the Total Propagated Error. The Vessel Configuration File (VCF) contains information about the different sensors installed on the survey vessel and their relationship to each other. The information in the file is applied to logged, converted data files, and when the final sounding positions are

calculated, the data is merged. The entries in the VCF are time tagged and multiple time tags can be defined for each sensor. This allows the user to update sensor information during the course of a survey. This may occur if a piece of equipment has been moved.

In order to define the new fields in the VCF it is essential to understand standard deviation. The standard deviation is a statistic that explains how tightly various examples are clustered around the mean in a set of data. When the data is tightly bunched together the bell-shaped curve is steep and the standard deviation is small. When the data is spread apart, the bell curve is relatively flat indicating a larger standard deviation.

The vessel information will be displayed in the Vessel Editor. The sensor positions are represented by colored dots. The VCF can be updated if a sensor changes position, and a unique time stamp ensures that the correct offsets are applied to data recorded at a certain time. Each time the sensor information is changed, the drop down list above the 3-D vessel model will be updated to include the new time stamps. The data grid below the 3-D vessel contains all the offset information for the vessel.

Tomorrow... we will talk about the stability of the ship, and how its is done (so we do not sink!).